



Maritime and Coastguard Agency

Ro-Ro Ships - The Carriage of Dangerous Goods in ships with ro-ro cargo spaces

Notice to shipowners, managers, ship operators, masters, officers, ratings, shipbuilders, ship repairers, cargo planners and shippers of vehicles

(This guidance note takes immediate effect)

Summary:

This guidance provides clarification as to the category or status of, and separation between, ro-ro cargo spaces for the stowage of dangerous goods. The categories of spaces are as specified in section 17 of the General Introduction to the International Maritime Dangerous Goods (IMDG) Code and in SOLAS Regulation II-2/3 or 54. Having obtained the status of these spaces, these standards are applied for safe stowage of dangerous goods as either “on deck only” or “under deck”, in accordance with IMDG Code.

This guidance is applicable to all United Kingdom ships and all ships within United Kingdom ports.

1. Introduction

Enquiries suggest that there may be some inconsistency in the industry as regards the application of requirements for the carriage of dangerous goods and in particular, the stowage of such goods on ro-ro decks within vehicles or other cargo transport units. The main concern that this guidance note addresses is the categorisation of spaces as either “open” or “closed”, as defined below.

2. Definitions

2.1 Such stowage spaces are defined in Section 17 of the International Maritime Dangerous Goods (IMDG) Code or in Chapter II-2 of SOLAS as:

“Ro-ro cargo space” is a space not normally subdivided in any way and extending to either a substantial length or the entire length of the ship in which goods, in or on rail or road cars,

vehicles (including road or rail tankers), trailers, containers, pallets, demountable tanks or, in or on similar stowage units or other receptacles that are loaded and unloaded, normally in a horizontal direction.

“Open ro-ro cargo space” is a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation that is effective over its entire length through permanent openings in the side plating or deckhead, to the satisfaction of the Administration.

“Closed ro-ro cargo space” is a ro-ro cargo space that is neither an open ro-ro cargo space nor a weather deck.

“Special category space” is an enclosed space, above or below the bulkhead deck, that is intended for the carriage of motor vehicles with fuel in their

tanks for their own propulsion, into and from which such vehicles can be driven and to which passengers have access.

“Weather deck” is a deck that is completely exposed to the weather from above and from at least two sides.

“Vehicle deck”, for the purposes of this section, is either a closed ro-ro cargo space, an open ro-ro cargo space, a special category space or a weather deck.

- 2.2 A “special category space” must be enclosed, and cannot be an open ro-ro cargo space. However, the space may not be sufficiently well equipped to be used for the carriage of dangerous goods as a closed ro-ro cargo space.

3. Categorisation

“Weather Deck”

There is usually little difficulty in identifying what is a “weather deck” since it must be completely open from above, as well as exposed on at least two sides. Such vehicle spaces may be most frequently found at the ends of a ro-ro ship. The weather deck will then be that part of the deck extending beyond (farther forward or farther aft) and clear of any deck above.

“Open or Closed Ro-Ro Spaces”

Open ro-ro vehicle spaces are also most frequently to be found at the ends of ro-ro ships but may extend the entire length of the ro-ro space. Such open spaces are situated below a higher deck supported by casings or sidsheer or both. Provided both ends of the vehicle space below the overhead deck are wholly open the free-flow of ventilation is assumed to be effective and the space may be categorised as an open ro-ro cargo space. If only one end is open but side openings are provided along the entire length of the space it may still be categorised as an open ro-ro cargo space if the relevant Administration is satisfied that such ventilation is effective. All remaining vehicle spaces that are neither open spaces or weather decks are considered closed ro-ro spaces. The flag State Administration should also be

consulted in respect of additional requirements for closed ro-ro cargo spaces intended for the carriage of dangerous goods.

4. Separation between different spaces

4.1 The effectiveness of the ventilation is particularly important when flammable liquids (with a flashpoint of less than 23°C) or flammable gases are being carried in an open vehicle or trailer and “on-deck” stowage is required. The following clarification should be noted:

.1 In ships having ro-ro cargo spaces, on the principle that potential sources of ignition will be situated in a closed space (in the form of electrical equipment which is not of certified safe type), a sufficient distance (or physical separation) shall be provided between a closed ro-ro cargo space and that part of any adjacent open ro-ro cargo space used for carriage of flammable liquids or gases. The separation shall be such as to minimise the passage of those liquids and vapours between such spaces and be resistant to both fire and liquid³.

2 Similarly, a sufficient distance (or physical separation) shall be provided between a closed ro-ro cargo space and that part of any adjacent weather deck space used for carriage of flammable liquids or gases.

4.2 To minimise the passage of dangerous vapours, gases and liquids between such spaces in the case of venting or leakage from the packages, dangerous goods liable to emit flammable gases or vapours should not be stowed within 3 metres of the entry to a closed ro-ro cargo space from an adjacent weather deck or open ro-ro cargo space unless the electrical arrangements within the closed space are in accordance with those required for the dangerous goods carried on the adjacent weather deck or open space. Such separation need not be applied if there is a physical barrier between the weather deck or open ro-ro cargo space and adjacent closed space.

4.3 The existence of any such distance or separation does not preclude stowage in any

part of the spaces or across the boundaries between weather/open and closed spaces where the cargo is non-dangerous. Where the cargo is dangerous goods, it may also be stowed across the boundaries between such spaces where such stowage is permitted in both the closed part of the cargo space and open space or weather deck, in accordance with the standards of the IMDG Code and, if applicable, the ship's document of compliance for the carriage of dangerous goods.

5. The use of vehicle spaces for the stowage of dangerous goods

"On-deck only" stowage is prescribed in the IMDG Code for a number of reasons but of particular relevance to ro-ro ships are those categories of dangerous goods where there is substantial risk of the formation of explosive gas mixtures, the development of highly toxic vapours, or unobserved corrosion of the ship. In consideration of these risks, the Maritime and Coastguard Agency, as the United Kingdom competent authority and as the Administration for UK

registered ro-ro ships, approves the use of weather decks and open ro-ro cargo spaces for the stowage of such "on-deck only" dangerous goods. For ships registered elsewhere the Flag State Administration should be requested by shipowners to confirm the status of vehicle spaces intended for the carriage of dangerous goods.

6. Documents of Compliance

Cargo ships of 500 GT and over and passenger ships constructed since 1 September 1984, and cargo ships of under 500 GT constructed since 1 February 1992, are required to carry a Document of Compliance if engaged in the carriage of dangerous goods on international voyages. Owners of other ships carrying dangerous goods are encouraged to obtain such a document. More recently the format of that Document has been amended to show the spaces which have been categorised for the stowage of dangerous goods and to limit its validity to five years. Owners whose ships have documentation over five years old should consider reviewing its validity.

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¹ An "open" vehicle or trailer is considered to be one with any fabric sides or top (Section 17.3.4 IMDG Code General Introduction).

² SOLAS II-2/54.2.2 recognises the risks associated with electrical equipment. This is also reflected in the need for flammable liquids and gases to be stowed "away from" all sources of heat in the introduction to applicable classes of such goods in the IMDG Code (meaning a distance of at least 3 metres when the vehicle concerned is of an "open" design).

³ General Introduction to the IMDG Code paragraph 15.1.14.

